

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL WEATHER SERVICE
NATIONAL METEOROLOGICAL CENTER

OFFICE NOTE 79

NMC PERMANENT FILES

36-Day Historical Data

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NMC is at present maintaining on its permanent files a 36 day reserve of selected fields from the NMC permanent files ANL, F12, F24, F36, F48, F60, F72, F84, F96, FCST1, and ANL5. Fields from the ANL file are recorded at 00Z and 12Z. Fields from the other files are recorded at 00Z only. The purpose of the historical files is to provide the user with a 36 day backlog of data fields that are always current. Each day, the fields with the oldest date are replaced with the current day's data. See attachment for the names and description of the historical files.

The file structure of the historical permanent files is generally the same as that of the NMC permanent files (ANL, F12, etc.) described in Office Note 44. However, there are tables that take on special significance for the historical files. These tables are denoted with asterisks.

File Structure

I. Random Files:

Record 1 consists of three words for identifying the file. Word 1 contains the cycle number - CYCLE (integer). Word 2 contains the time - T, year - Y, month - M, day - D, and continuity check - CC (all integers)

*****If CC is equal to 0077777777₈ 36 days of data are accounted for.
If CC is equal to nn66666666₈ one of the scheduled runs for maintaining the files was not made. In this event, the missing data field is retrieved from the PEPMERGE tape.

Word 3 contains the logical file name - LFN (coded left justified, zero filled).

	59					0
word 1	CYCLE					
word 2	T	Y	M	D	CC	
word 3	54	45	39	33	LFN	
	59			35		0

The remaining entries in the table, three words per record, are in the following form:

Word 1 and Word 2 are unique record identifiers (see Office Note 28).

Word 3 contains CM, CD, X and K table.

*****CM, CD are added to the field's identification before it is stored on the historical permanent file.

CM - time and month, CD-day of month (integers)

CM= 1 for Jan 00Z Data CM=15₈ for Jan 12Z Data

.

CM= 14₈ for Dec. 12Z Data CM=30₈ for Dec 12Z Data

The high order bit for CM is set if data is hopelessly missing (machine failure, model failure, etc.).

CM = 41₈ for Jan 00Z data not available

CM = 55₈ for Jan 12Z data not available

CM = 54 for Dec 00Z data not available

CM = 70₈ for Dec 12Z data not available

word 1

word 2

word 3

Q	S ₁	C ₁	E ₁	F ₁
M	T	S ₂	C ₂	E ₂
		CM	CD	X
				K
59	33	27	21	12
				0

See Office Note 28

File Usage

The historical permanent files will normally be found on machine C. The code for updating the files is run at operational time 00Z and 12Z, on the CDC 6600 Computer. The data fields are stored on the disk of the machine that is used for operations. Usually machine C is used; however, periodically machine A is used. For this reason, it is possible that the files may not be on the machine the user requests. If an unsuccessful attempt is made to attach the files, jump to an XPAUSE card and request that the operator run JO941 and rerun your job. JO941 loads the files from tape to disk. Note: There is not a read pass word for reading these files. See example below for usage.

Example

```

JL111,CM50000,T100.      John Doe   Bin Z
PFILE,C.
RFL,50000.
FTN(LX,OPT-1, P-PUNCHB,A)
RFL,1000.
ATTACH(FH50,W3FHA,CY=55,ID=W34)
JUMP(1)
EXIT.
JUMP(2)
PASS(1)
RFL,50000.
LOAD(PUNCHB)
EXECUTE.
JUMP(3)
PASS(2)
XPAUSE. PLEASE RUN JO941 AND RERUN THIS JOB
PASS(3)
7-8-9 (END OF RECORD)

```

```

PROGRAM DATAVG(INPUT,OUTPUT,FH50=0)
C  READ 5 DAYS OF 500MB HT 72 HOURS AFTER FORECAST TIME
  DIMENSION ID(3),DATE(5),IDTBL(760),LOCTBL(254),DATFLD(401)
C  DATES FROM SEPT. 30,1972 THRU OCT.4,1972
  DATA DATE/0011011330000000000000B,0011012010000000000000B,00110120200000000000B,
    DATA FH50/4LEFH50/
C  OPEN HISTORICAL FILE FH50
  CALL W3FK00(FH50,LOCTBL,254)
  CALL W3FK01(FH50,IDTBL,252)
  ID(1)=000100101415204200000B
  ID(2)=0
  DO 1 L=1,5
C  TAKE DATE WORD AND PLACE IT IN FORMAT OF THIRD ID DATE
  ID(3)=SHIFT(AND(DATE(L),777700000000000000B),48)
  ITIME=770000000000000000000000B.AND.DATE(L)
  IF(ITIME.NE.0)ID(3)=140000000000B / ID(3)
C  READ HISTORICAL FILE FH50
  CALL W3FK03(FH50,IDTBL,ID,DATFLD,252,401,IERR)
  IF(IERR.NE.0)GO TO 2
C  AVERAGE DATA
C  OUTPUT DATA
C  ERROR EXIT

```

2

```

  STOP
  END

```

7-8-9 (END OF RECORD)

6-7-8-9 (END OF FILE)

NMC HISTORICAL DATA PERMANENT FILES
(36 DAYS FOR EACH FIELD LISTED)

<u>PF NAME</u>	<u>CYCLE</u>	<u>LFN</u>	<u>No. of Rcds</u>	<u>CONTENTS OF LOGICAL FILE</u>	<u>DATA SOURCE</u>
W3OBS1	51	HOP	288	00Z / 12Z Sea level pressure, 1000mb ht. 700mb ht., 500mb ht.	ANL
	52	H85	216	00Z / 12Z 850mb ht., 300mb ht., 200 mb ht.	ANL
	53	TS7	144	00Z / 12Z 700mb temp., and Sea surface temperature	ANL
	54	H100	180	00Z 100, 70, 50, 30, 10 mb hts.	ANL5
	55	T100	180	00Z 100, 70, 50, 30, 10 mb temp.	ANL5
W3HFA	51	FHSL	252	00Z Sea level pressure at 12, 24, 36, 48, 60, 72, / 84 hours	F12, F24, F36, F48, F60, F72, F84
	52	FH100	252	00Z 1000mb ht. at 12, 24, 36, 48, 60, 72, / 84 hours	F12, F24, F36, F48, F60, F72, F84
	53	FH85	252	00Z 850mb ht. at 12, 24, 36, 48, 60, 72, / 84 hours	F12, F24, F36, F48, F60, F72, F84
	54	FH70	252	00Z 700mb ht. at 12, 24, 36, 48, 60, 72, / 84 hours	F12, F24, F36, F48, F60, F72, F84
	55	FH50	252	00Z 500mb ht. at 12, 24, 36, 48, 60, 72, / 84 hours	F12, F24, F36, F48, F60, F72, F84